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(54) Title: MULTIPLEX PCR

(57) Abstract: Compositions and methods for nucleic acid amplification are provided that minimize the formation and amplification of spurious products, particularly in multiplex amplification reactions. Linear amplification molecules are provided. A first embodiment comprises a first common primer sequence, a first template homology region, a cleavable site, a second common primer sequence and a second template homology region. Methods employing the linear amplification molecules for nucleic acid amplification are also provided. A first embodiment comprises a template-specific hybridization, a linear amplification, a template-specific intramolecular hybridization, a strand cleavage, a second linear amplification and an exponential amplification using common primers.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/37238

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68, C12P 19/34; C07H 21/02, 21/04, 19/00  
US CL : 435/6, 91.1, 91.2; 536/22.1, 23.1, 24.3, 24.31, 24.32, 24.33

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## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 435/6, 91.1, 91.2; 536/22.1, 23.1, 24.3, 24.31, 24.32, 24.33

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,731,171 A (BOHLANDER) 24 March 1998 (24.03.1998), see whole doc.	1-36

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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INTERNATIONAL SEARCH REPORT

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**Continuation of B. FIELDS SEARCHED Item 3:**

EAST-USPATFULL, DERWENT, JPO,EPO, IBMTECH, PGPUB,  
STN-BIOSIS, MEDLINE, CANCERLIT, BIOTECHDS, LIFESCI,CAPLUS,EMBASE  
search terms-multiplex, dimer, primer, spurious, linear, amplification , loop, cleavage

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